

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1 1. (Currently amended): A computer-implemented method for generating a
2 portal page, the method comprising:

3 ~~generating forwarding information, from a first computer system to a second~~
4 ~~computer system, that configures the second computer system to display one or more a set of~~
5 graphical user interfaces ~~using a computer system~~ that enable users of ~~the second computer~~
6 ~~system~~ to interactively construct software code ~~representing~~ that generates portlets configured to
7 generate ~~information displays when included on [[a]] the~~ portal page;

8 ~~displaying forwarding information, from the first computer system to the second~~
9 ~~computer system, that configures the second computer system to display~~ a first user interface in
10 the ~~set of one or more graphical user interfaces based on selections by the users of the second~~
11 ~~computer system of data types for data sources associated with portlets being designed by the~~
12 ~~users using the computer system~~, the first user interface configured to receive access information
13 associated with a data source declaratively specified by [[a]] ~~the users of the second computer~~
14 ~~system~~ during [[an]] interactive sessions with the ~~one or more set of graphical user interfaces of~~
15 ~~the data sources associated with the portlet being designed by the users~~;

16 ~~displaying forwarding information, from the first computer system to the second~~
17 ~~computer system, that configures the second computer system to display~~ a second user interface
18 in the ~~set of one or more graphical user interfaces using the computer system~~, the second user
19 interface configured to receive layout information declaratively specified by the users of the
20 ~~second computer system~~ during the interactive sessions with the ~~set of one or more graphical~~
21 ~~user interfaces, the layout information indicative of at least one layout style from one or more~~
22 ~~layout styles presented by the second user interface for data from the data sources associated~~

23 with the portlets being designed by the users visualization of information from one or more data
24 sources generated by a portlet when the portlet is included within a portal page;
25 determining a data source specification using [[the]] a computer system based on
26 access information associated with a first data source of a first data type selected by a first user
27 of the second computer system, the access information received via the first user interface from
28 [[a]] the first user of the second computer system during a[[n]] first interactive session with the
29 one or more first graphical user interfaces;
30 determining a layout specification using the computer system based on a first
31 layout style in layout information received via the second user interface from [[a]] the first user
32 of the second computer system during [[an]] the first interactive session with the one or more
33 first graphical user interfaces;
34 generating software coding using the computer system that represents creates a
35 portlet being designed by the first user of the second computer system during the first interactive
36 session with the one or more graphical user interfaces based on the data source specification and
37 the layout specification, the portlet configured by the software coding to obtain data from the
38 first data source and to create at least one visual representation according to the first layout style
39 within the portal when included on the portal page of the data obtained from the first data source
40 specified by the data source specification according to the layout specification;
41 retrieving data for the first data source using the computer system based on the
42 software coding that represents the portlet data source specification and the access information;
43 determining a layout within the portlet for the data retrieved for the first data
44 source within the portlet using the computer system based on the software coding that represents
45 the portlet layout specification; and
46 generating using the computer system the portal page using the portlet.

1 2. (Currently amended): The method of claim 1, wherein determining the
2 data source specification based on the access information associated with the first data source of
3 the first data type selected by the first user of the second computer system comprises determining
4 the a data type of for the first data source.

1 3. (Currently amended): The method of claim 2, wherein determining the
2 data type of the first data source comprises determining at least one of a spreadsheet data type,
3 XML data type, SQL data type, web service data type, and a web page data type.

1 4. (Currently amended): The method of claim 1, wherein determining the
2 data source specification based on the access information associated with the first data source of
3 the first data type selected by the first user of the second computer system comprises determining
4 a path to the first data source.

1 5. (Currently amended): The method of claim 4, wherein determining the
2 path comprises determining a URL.

1 6. (Currently amended): The method of claim 1, wherein determining the
2 data source specification based on the access information associated with the first data source of
3 the first data type selected by the first user of the second computer system comprises determining
4 a filtering specification based on filter information received from the first user during the first
5 interactive session via a third graphical user interface in the one or more graphical user
6 interfaces, the third graphical user interface configured to receive data filters specified by the
7 users of the second computer system that filter[[s]] data retrieved from the data sources for the
8 portlets being designed by the users.

1 7. (Currently amended): The method of claim 1, wherein determining the
2 layout specification based on the first layout style in the layout information comprises
3 determining the first layout style as at least one of a tabular layout, chart layout, news layout,
4 form layout, and bullet layout.

1 8. (Currently amended): The method of claim 1, wherein determining the
2 layout within the portlet for the data retrieved for the first data source comprises formatting the
3 retrieved data retrieved for the first data source into the first layout style.

1 9. (Original): The method of claim 1, wherein the portal page comprises a
2 web-based page.

1 10. (Currently amended): The method of claim 1, wherein the portal page
2 comprises a non web-based page portlet.

1 11. (Currently amended): A computer-implemented method for generating a
2 user-customizable graphical user interface (GUI), the method comprising:

3 generating forwarding information, from a first computer system to a second
4 computer system, that configures the second computer system to display one or more a set of
5 graphical user interfaces using a computer system that enable users of the second computer
6 system to interactively construct software code representing that creates objects portlets
7 configured to generate information displays [[on]] within the user-customizable GUI a portal
8 page;

9 providing forwarding information, from the first computer system to the second
10 computer system, that enables the [[a]] display of a data source interface in the set of one or
11 more graphical user interfaces based on selections by the users of the second computer system of
12 data types for data sources associated with objects being designed by the users using the
13 computer system, the data source interface configured to receive that enables a user to
14 declaratively specify access information for a data source declaratively specified by the users of
15 the second computer system during one or more interactive sessions with the data source
16 interface of the data source associated with the object being designed by the users;

17 determining a declarative specification for the data source using a [[the]]
18 computer system based on access information associated with a first data source of a first data
19 type provided by [[the]] a first user of the second computer system during an interactive session
20 with the data source interface;

21 retrieving, using the computer system, data for the first data source using the
22 access information;

23 providing forwarding information, from the first computer system to the second
24 computer system, that enables the [[a]] display of a layout interface in the set of one or more
25 graphical user interfaces, the layout interface configured to receive layout information
26 declaratively specified by the users of the second computer system during the one or more
27 interactive sessions with the one or more graphical user interfaces, the layout information
28 indicative of at least one layout options from one or more layout options presented by the layout
29 interface for data from the data sources associated with the objects being designed by the users
30 that enables the user to declaratively specify a layout for the data for the data source during one
31 or more interactive sessions with the layout interface;

32 determining a layout specification using the computer system based on [[the]] a
33 first layout option provided by the first user of the second computer system during an interactive
34 session with the layout interface, the layout specification indicative of one or more visualizations
35 within the object being designed by the first user of the data retrieved from [[for]] the first data
36 source when included on the user-customizable GUI graphical user interface; and

37 generating, using the computer system, software coding that represents the creates
38 an object being designed by the first user based on the declarative specification for the data
39 source and the layout specification, the object configured to [[that]] create[[s]] a graphical user
40 interface when included on the user-customizable GUI, the graphical user interface of the object
41 displaying the retrieved data from the first data source according to the first layout option
42 provided by the user based on the declarative specification for the data source and the layout
43 specification.

1 12. (Currently amended): The method of claim 11, wherein forwarding
2 information, from the first computer system to the second computer system, that enables the
3 display of the data source interface comprises forwarding information that enables the display of
4 one or more data types in the data source interface and that further enables [[a]] the users of the
5 second computer system to specify [[a]] data type for the data sources associated with objects
6 being designed by the users.

1 13. (Original): The method of claim 12, wherein the one or more data types
2 comprise at least one of a spreadsheet data type, XML data type, SQL data type, web service
3 data type, and a web page data type.

1 14. (Currently amended): The method of claim 12, wherein determining
2 retrieving, using the computer system, the data for the first data source using the access
3 information comprises using the specified first data type and the access information to retrieve
4 the data for the specified first data source.

1 15. (Original): The method of claim 11, wherein the access information
2 comprises a URL.

1 16. (Currently amended): The method of claim 11, further comprising
2 providing forwarding information, from the first computer system to the second computer
3 system, that enables the display of a filtering interface in the one or more graphical user
4 interfaces, the filtering interface including filtering options for the retrieved data that enables
5 [[a]] the users of the second computer system to declaratively specify which data to use in the
6 user-customizable generated GUI.

1 17. (Currently amended): The method of claim 11, wherein forwarding
2 information, from the first computer system to the second computer system, that enables the
3 display of the layout interface comprises forwarding information that enables the display of one
4 or more layout options and that enables the user to declaratively specify a layout type.

1 18. (Original): The method of claim 17, wherein the layout type comprises at
2 least one of a tabular layout, chart layout, news layout, form layout, and bullet layout.

1 19. (Currently amended): The method of claim 17, further comprising
2 providing forwarding information, from the first computer system to the second computer
3 system, that enables the display of a layout type interface that enables the user to further specify

4 how the retrieved data from the data sources associated with the objects being designed by the
5 users should be laid out in the user-customizable GUI using the specified layout type.

1 20. (Original): The method of claim 11, wherein the data source interface
2 does not include the access information for the data source before it is declaratively specified by
3 the user.

1 21. (Currently amended): The method of claim 11, wherein the user-
2 customizable GUI comprises a web-based page.

1 22. (Currently amended): The method of claim 11, wherein the object of the
2 user-customizable GUI comprises a portlet.

1 23. (Currently amended): A computer-implemented method for declaratively
2 generating a page using an interface configure to enable a user[[s]] to create objects that generate
3 one or more visual representation of data when associated with the page, the method comprising:
4 forwarding information, from a first computer system to a second computer
5 system, that configures the second computer system to display[[ing]] the interface to the user
6 using a computer system to enable the user to construct software code representing that creates
7 the objects that generate one or more visual representations of data on the page;

8 forwarding information, from the first computer system to the second computer
9 system, that enables the user to select during an interactive session with the interface one or more
10 data types presented by the interface for data sources associated with the objects being designed
11 by the user, the interface configured based on the information to receive access information
12 declaratively specified by the user during the interactive session with the interface of the data
13 sources associated with the objects being designed by the user;

14 receiving, at using a computer system, via the interface first input from the user
15 during one or more interactive sessions between the user and with the interface, the first input
16 indicative of access information associated with a first data source of an object that generates one
17 or more visual representation of data when associated with the page;

18 retrieving, using a computer system, data from the first data source using the
19 access information;

20 forwarding information, from the first computer system to the second computer
21 system, that enables the user of the second computer system to select during an interactive
22 session with the interface one or more layout types presented by the interface for data obtained
23 from the data sources associated with the objects being designed by the user, the interface
24 configured based on the information to receive a selection by the user during the interactive
25 session with the interface of at least one layout style from one or more layout styles presented by
26 the interface for the data from the data sources associated with the objects being designed by the
27 user;

28 determining, using a computer system, layout information for the data retrieved
29 associated with from the first data source from second input from the user received during the
30 one or more interactive sessions between the user and the interface, the layout information
31 indicative of one or more visualizations in a first layout style selected by the first user of the data
32 retrieved from the first data source for the created by an object when included on [[a]] the page;

33 generating software coding for the one or more page object[[s]] using a computer
34 system that create displays the one or more visualizations of the data retrieved from the first data
35 source of information according to the layout information in response to the one or more
36 interactive sessions between the user and the interface; and

37 generating [[a]] the page using a computer system using the object retrieved data
38 and the layout information.

1 24. (Currently amended): The method of claim 23, wherein receiving the first
2 input declarative specification comprises receiving a declarative specification of a data type for
3 the data source.

1 25. (Original) The method of claim 23, wherein the access information
2 comprises a path to the data source.

1 26. (Original): The method of claim 25, wherein the path comprises a URL.

1 27. (Currently amended): The method of claim 23, wherein receiving the first
2 input declarative specification comprises receiving a filtering specification that filters data
3 retrieved from the data source.

1 28. (Original): The method of claim 23, wherein the page comprises a web-
2 based page.

1 29. (Currently amended): The method of claim 23, wherein the object on the
2 page comprises a portlet.